

WHAT IS CLAIMED IS:

1. A method for generating page description language, the method, comprising:

- (a) accepting a drawing command;
- (b) determining whether or not the accepted drawing command is a logical drawing command;
- (c) if the accepted drawing command is a logical drawing command, adding the accepted drawing command to a held drawing command sequence table;
- (d) comparing the held drawing command sequence table with entries in a reference table including registered substitution conditions for drawing commands to determine if there is an entry in the reference table that matches the held drawing command sequence table; and
- (e) if there is an entry in the reference table that matches the held drawing command sequence table:
  - (i) obtaining a substitution drawing command from the reference table for the entry in the reference table that matches the held drawing command sequence table;
  - (ii) generating page description language by outputting the substitution drawing command; and
  - (iii) clearing the held drawing command sequence table.

2. The method according to Claim 1, further comprising: if there are not any entries in the reference table that match the held drawing command sequence table:

generating page description language for the accepted drawing commands in the held drawing command sequence table by outputting the accepted drawing commands in the held drawing command sequence table based on an order of accepting the drawing commands in the held drawing command sequence table; and

clearing the held drawing command sequence table.

3. The method according to Claim 1, further comprising:

if there are not any entries in the reference table that match the held drawing command sequence table, determining whether there is a possibility that at least one entry in the reference table will match the held command sequence table if additional drawing commands are accepted and added to the held drawing command sequence table; and

if it is determined that there is a possibility that at least one entry in the reference table will match the held drawing command sequence table if additional drawing commands are accepted and added to the held drawing command sequence table, repeating (a) - (e).

4. The method according to Claim 3, further comprising: if there are not any entries in the reference table that match the held drawing command sequence table and it is determined that there is not a possibility that any of the entries in the reference table will match the held drawing command sequence table if additional drawing commands are accepted and added to the held drawing command sequence table:

generating page description language for the accepted drawing commands in the held drawing command sequence table by outputting the accepted drawing commands in the held drawing command sequence table based on an order of accepting the drawing commands in the held drawing command sequence table; and

clearing the held drawing command sequence table.

5. The method according to Claim 1, wherein the entries in the reference table include, as the registered substitution conditions, a type of drawing command, an order of accepting the drawing commands, and conditions regarding the drawing commands.

6. The method according to Claim 5, wherein, determining if there is an entry in the reference table that

matches the held drawing command sequence table is determined based on whether or not the type of drawing command, the order of accepting the drawing commands, and the conditions regarding the drawing commands in the reference table, match those of the held drawing command sequence table.

7. The method according to Claim 5, further comprising: if there are not any entries in the reference table that match the held drawing command sequence table, determining whether there is a possibility that at least one entry in the reference table will match the held command sequence table if additional drawing commands are accepted and added to the held drawing command sequence table based on whether or not the type of drawing command, the order of accepting the drawing commands, and the conditions regarding the drawing commands for a portion of the at least one entry in the reference table, match those of the held drawing command sequence table.

8. The method according to Claim 1, further comprising: if it is determined that the accepted drawing command is not a logical drawing command, generating page description language by outputting the accepted drawing command without substitution.

9. A computer-readable program for generating page description language, the computer-readable program comprising code for:

- (a) accepting a drawing command;
- (b) determining whether or not the accepted drawing command is a logical drawing command;
- (c) adding the accepted drawing command to a held drawing command sequence table if the accepted drawing command is a logical drawing command,;
- (d) comparing the held drawing command sequence table with entries in a reference table including registered substitution conditions for drawing commands to determine if there is an entry in the reference table that matches the held drawing command sequence table; and
- (e) if there is an entry in the reference table that matches the held drawing command sequence table:
  - (i) obtaining a substitution drawing command from the reference table for the entry in the reference table that matches the held drawing command sequence table;
  - (ii) generating page description language by outputting the substitution drawing command; and
  - (iii) clearing the held drawing command sequence table.

10. The computer-readable program according to Claim 9, further comprising code wherein if there are not any entries in the reference table that match the held drawing command sequence table:

generating page description language for the accepted drawing commands in the held drawing command sequence table by outputting the accepted drawing commands in the held drawing command sequence table based on an order of accepting the drawing commands in the held drawing command sequence table; and

clearing the held drawing command sequence table.

11. The computer-readable program according to Claim 9, further comprising code wherein:

if there are not any entries in the reference table that match the held drawing command sequence table, determining whether there is a possibility that at least one entry in the reference table will match the held command sequence table if additional drawing commands are accepted and added to the held drawing command sequence table; and

if it is determined that there is a possibility that at least one entry in the reference table will match the held drawing command sequence table if additional drawing commands are accepted and added to the held drawing command

sequence table, repeating (a) - (e).

12. The computer-readable program according to Claim 11, further comprising code wherein if there are not any entries in the reference table that match the held drawing command sequence table and it is determined that there is not a possibility that any of the entries in the reference table will match the held drawing command sequence table if additional drawing commands are accepted and added to the held drawing command sequence table:

generating page description language for the accepted drawing commands in the held drawing command sequence table by outputting the accepted drawing commands in the held drawing command sequence table based on an order of accepting the drawing commands in the held drawing command sequence table; and

clearing the held drawing command sequence table.

13. The computer-readable program according to Claim 9, wherein the entries in the reference table include, as the registered substitution conditions, a type of drawing command, an order of accepting the drawing commands, and conditions regarding the drawing commands.

14. The computer-readable program according to Claim

13, further comprising code for determining if there is an entry in the reference table that matches the held drawing command sequence table based on whether or not the type of drawing command, the order of accepting the drawing commands, and the conditions regarding the drawing commands in the reference table, match those of the held drawing command sequence table.

15. The computer-readable program according to Claim 13, further comprising code wherein if there are not any entries in the reference table that match the held drawing command sequence table, determining whether there is a possibility that at least one entry in the reference table will match the held command sequence table if additional drawing commands are accepted and added to the held drawing command sequence table based on whether or not the type of drawing command, the order of accepting the drawing commands, and the conditions regarding the drawing commands for a portion of the at least one entry in the reference table, match those of the held drawing command sequence table.

16. The computer-readable program according to Claim 9, further comprising code wherein if it is determined that the accepted drawing command is not a logical drawing command, page description language is generated by outputting the

accepted drawing command without substitution.

17. An information processing device, comprising:  
drawing command accepting means for accepting a drawing command;

determining means for determining whether or not the accepted drawing command is a logical drawing command;

holding means for adding the accepted drawing command to a held drawing command sequence table if the accepted drawing command is a logical drawing command;

comparing means for comparing the held drawing command sequence table with entries in a reference table including registered substitution conditions for drawing commands to determine if there is an entry in the reference table that matches the held drawing command sequence table; and

page description language generating means for, upon determination by the comparing means that there is an entry in the reference table that matches the held drawing command sequence table, obtaining a substitution drawing command from the reference table for the entry in the reference table that matches the held drawing command sequence table, generating page description language by outputting the substitution drawing command, and clearing the held drawing command sequence table.

18. The information processing device according to Claim 17, wherein the page description language generating means, upon determination by the comparing unit that there are not any entries in the reference table that match the held drawing command sequence table, generated page description language for the accepted drawing commands in the held drawing command sequence table by outputting the accepted drawing commands in the held drawing command sequence table based on an order of accepting the drawing commands in the held drawing command sequence table, and clears the held drawing command sequence table.

19. The information processing device according to Claim 17, wherein

if the comparing means determines that there are not any entries in the reference table that match the held drawing command sequence table, the comparing means determines whether there is a possibility that at least one entry in the reference table will match the held command sequence table if additional drawing commands are accepted by the drawing command accepting means and added to the held drawing command sequence table by the holding means; and

if the comparing unit determines that there is a possibility that at least one entry in the reference table will match the held drawing command sequence table if

additional drawing commands are accepted and added to the held drawing command sequence table:

the drawing command accepting means accepts an additional drawing command;

the determining means determines whether or not the accepted additional drawing command is a logical drawing command;

the holding means adds the additional accepted drawing command to the held drawing command sequence table if the accepted drawing command is a logical drawing command;

the comparing means compares the held drawing command sequence table including the additional accepted drawing command with entries in the reference table to determine if there is an entry in the reference table that matches the held drawing command sequence table with the additional accepted drawing command; and

if the comparing means determines that there is an entry in the reference table that matches the held drawing command sequence table with the additional accepted drawing command, the page description language generating means obtains the substitution drawing command from the reference table for the entry in the reference table that matches the held drawing command

sequence table including the additional accepted drawing command, generates page description language by outputting the substitution drawing command, and clears the held drawing command sequence table.

20. The information processing device according to Claim 19, wherein if the comparing means determines that there are not any entries in the reference table that match the held drawing command sequence table and there is not a possibility that any of the entries in the reference table will match the held drawing command sequence table if additional drawing commands are accepted by the drawing command accepting means and added to the held drawing command sequence table by the holding means, the page description language generating means generates page description language for the accepted drawing commands in the held drawing command sequence table by outputting the accepted drawing commands in the held drawing command sequence table based on an order of accepting the drawing commands in the held drawing command sequence table, and clears the held drawing command sequence table.

21. The information processing device according to Claim 17, wherein the entries in the reference table include, as the registered substitution conditions, a type of drawing

command, an order of accepting the drawing commands, and conditions regarding the drawing commands.

22. The information processing device according to Claim 21, wherein, the comparing means determines if there is an entry in the reference table that matches the held drawing command sequence table based on whether or not the type of drawing command, the order of accepting the drawing commands, and the conditions regarding the drawing commands in the reference table, match those of the held drawing command sequence table.

23. The information processing device according to Claim 21, wherein if the comparing means determines that there are not any entries in the reference table that match the held drawing command sequence table, the comparing means determines whether there is a possibility that at least one entry in the reference table will match the held command sequence table if additional drawing commands are accepted and added to the held drawing command sequence table based on whether or not the type of drawing command, the order of accepting the drawing commands, and the conditions regarding the drawing commands for a portion of the at least one entry in the reference table, match those of the held drawing command sequence table.

24. The information processing device according to Claim 17, wherein if the comparing means determines that the accepted drawing command is not a logical drawing command, the page description language generating means generates page description language by outputting the accepted drawing command without substitution.